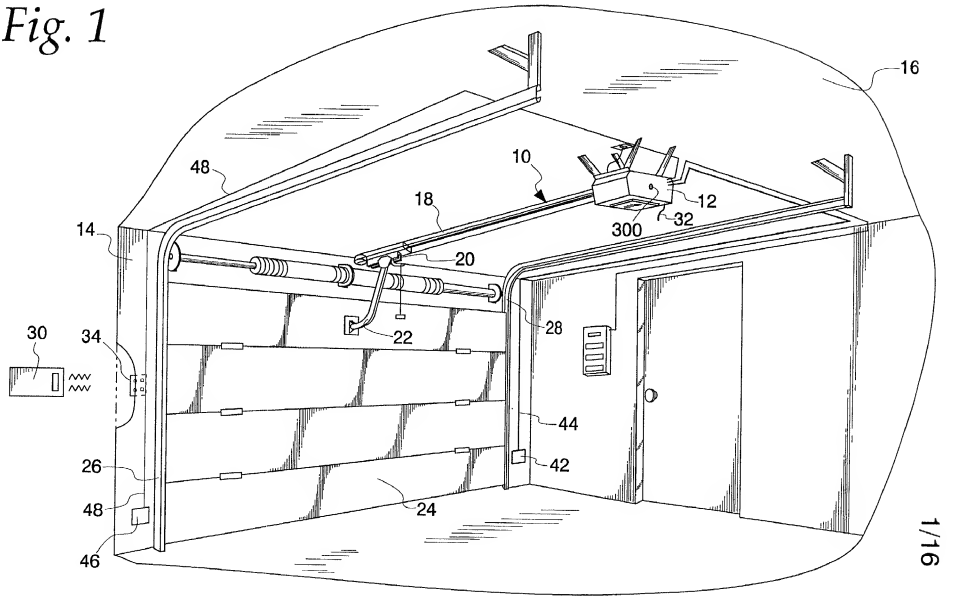
WO 2004/085860

Fig. 1



10/2101 PCT/EP01/08660

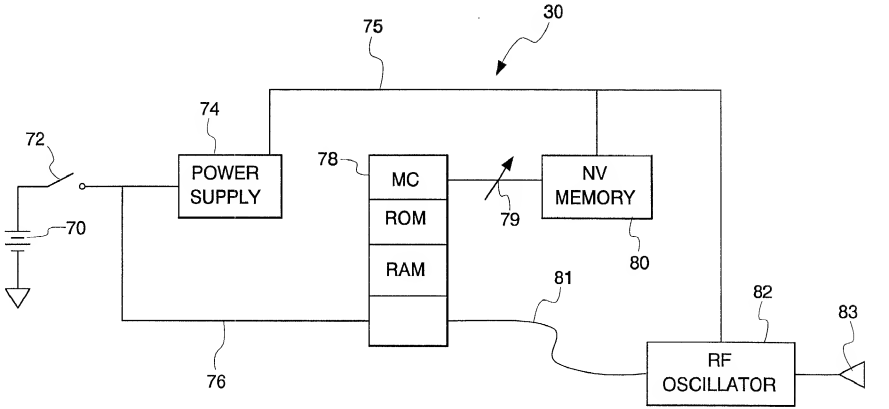


Fig. 2

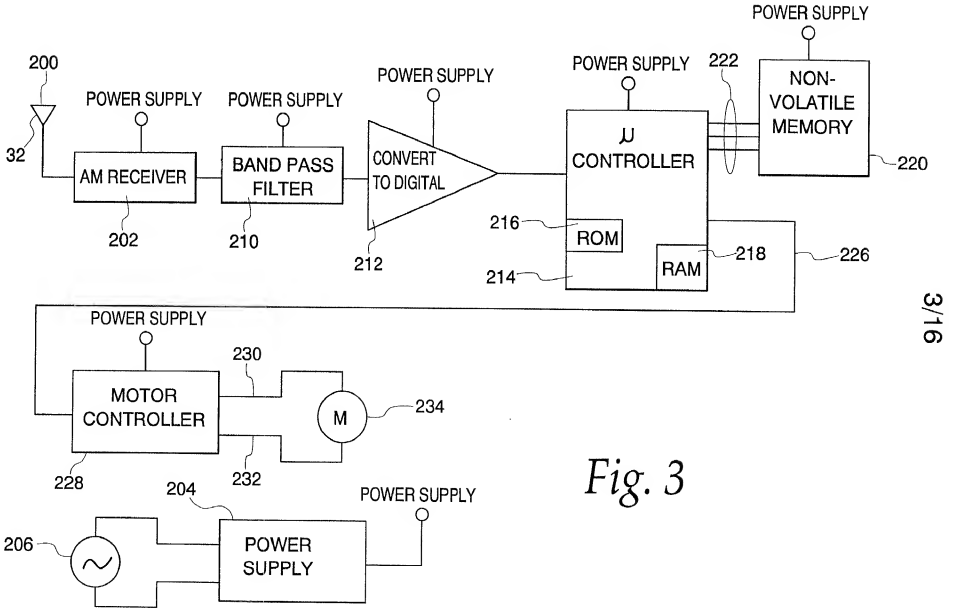

200
32
POWER SUPPLY
AM RECEIVER
202
POWER SUPPLY
BAND PASS FILTER
210
POWER SUPPLY
CONVERT TO DIGITAL
212
POWER SUPPLY
μ CONTROLLER
216
ROM
214
RAM
218
222
POWER SUPPLY
NON-VOLATILE MEMORY
220
226
POWER SUPPLY
MOTOR CONTROLLER
228
230
M
234
232
204
POWER SUPPLY
206
POWER SUPPLY

Fig. 3

D699,193 10/10/01

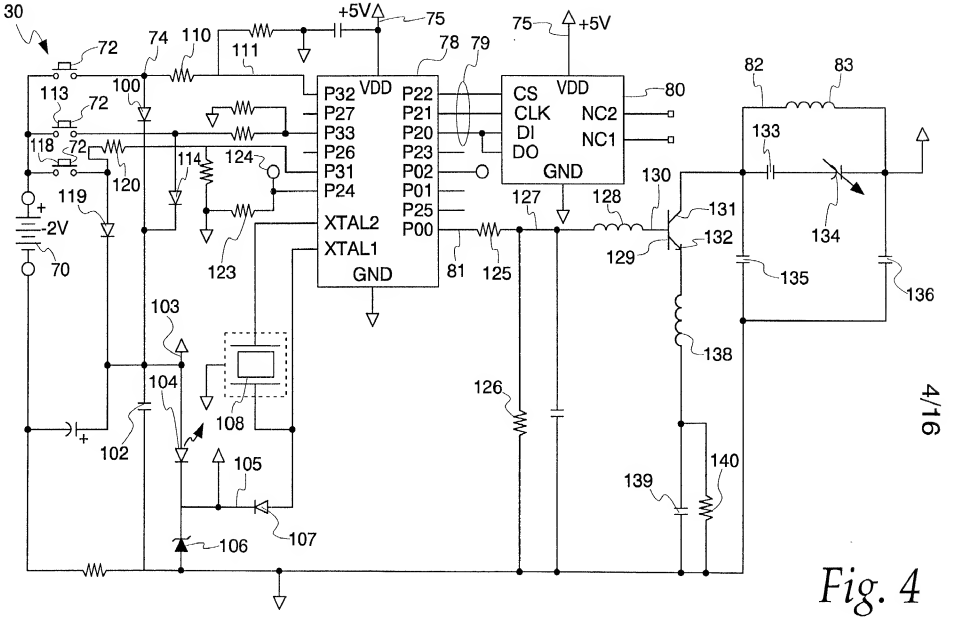
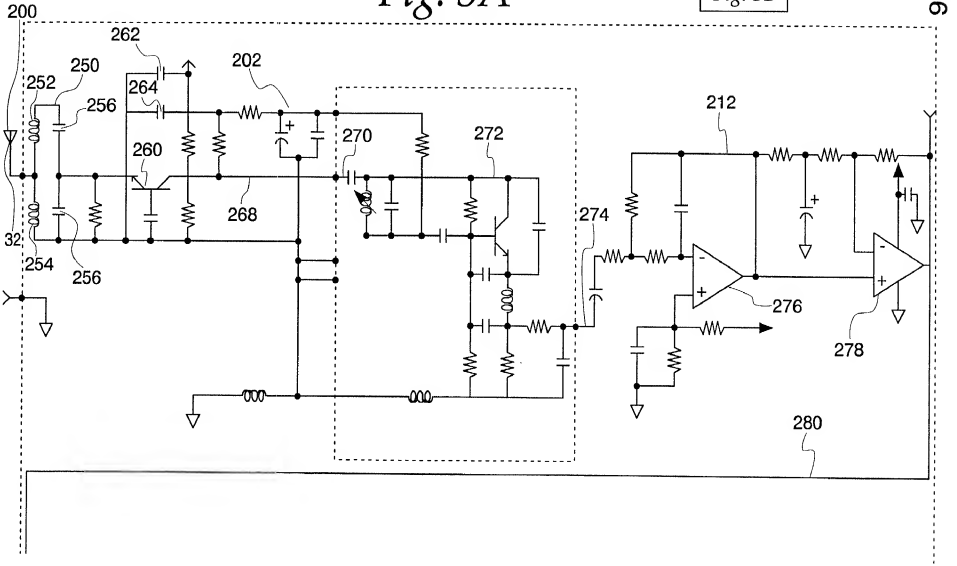


Fig. 4

Fig. 5A

Fig. 5A
Fig. 5B



T02T01 EE:T8660

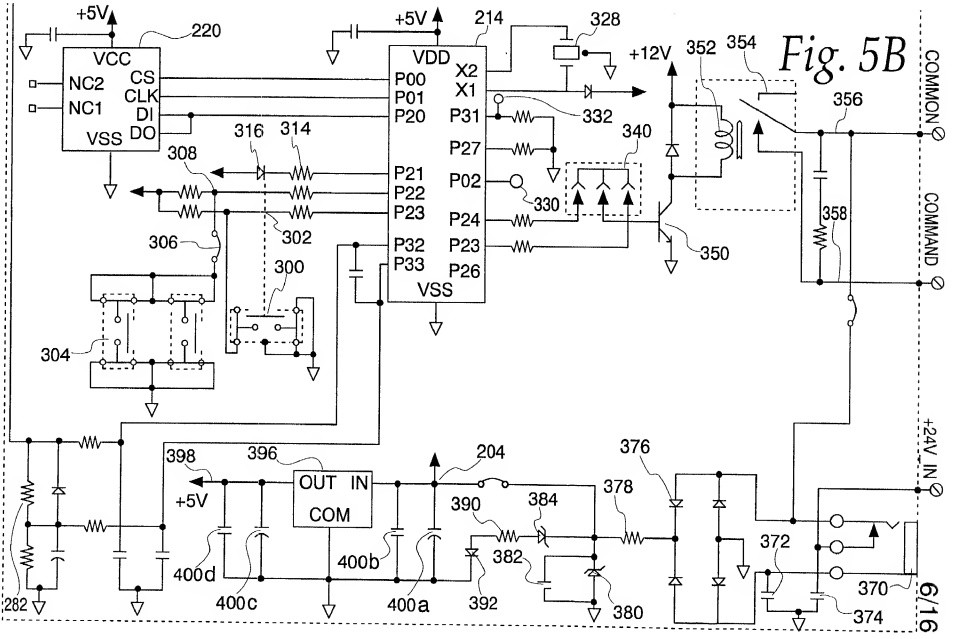
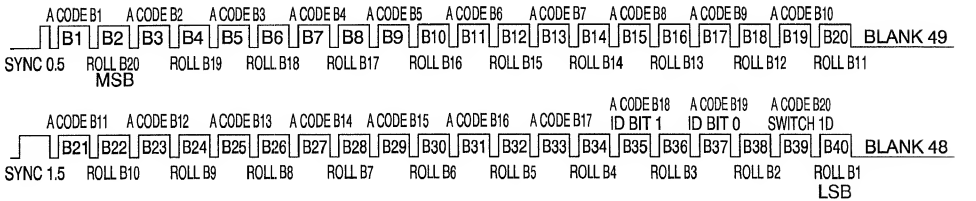


Fig. 5B

EQUIFAX EXHIBIT 1006



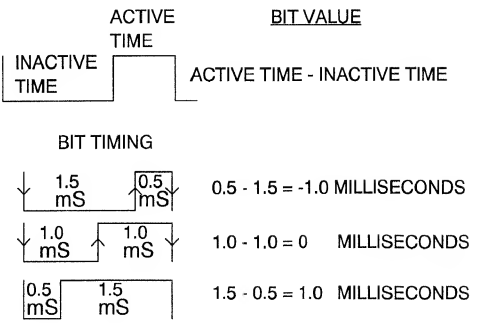


Fig. 6

Fig. 7A
Fig. 7B
Fig. 7C

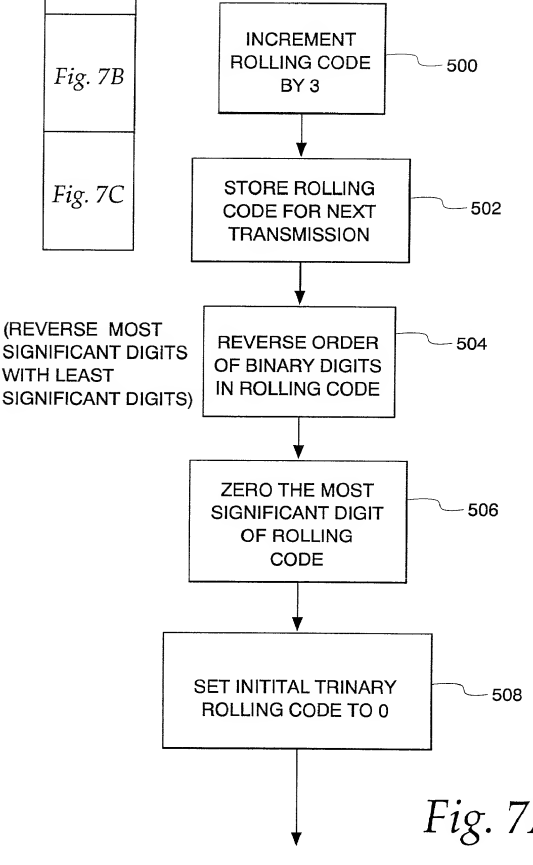


Fig. 7A

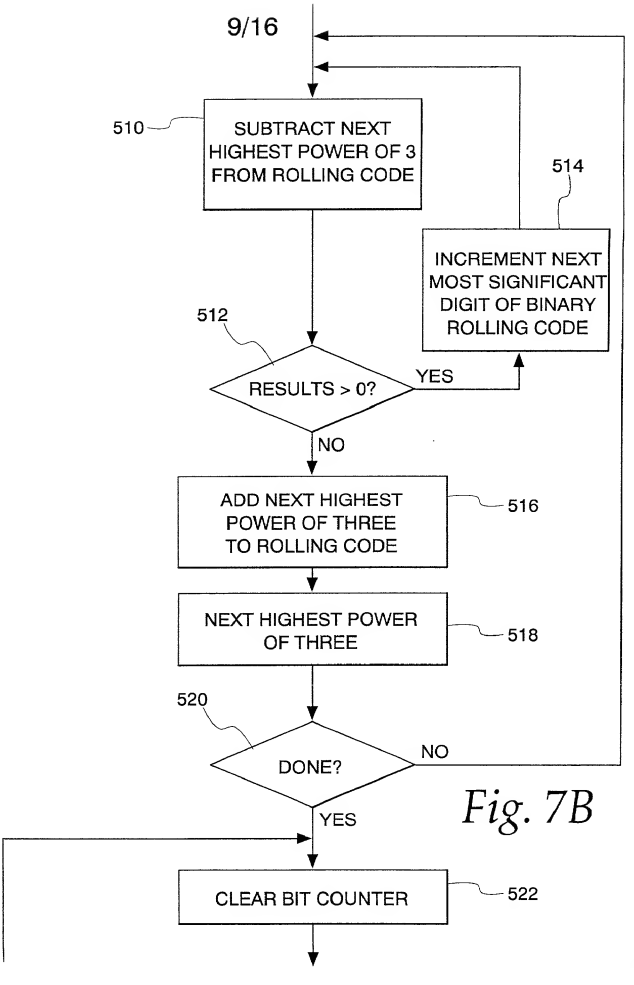

510
SUBTRACT NEXT HIGHEST POWER OF 3 FROM ROLLING CODE
514
INCREMENT NEXT MOST SIGNIFICANT DIGIT OF BINARY ROLLING CODE
512
RESULTS > 0?
YES
NO
ADD NEXT HIGHEST POWER OF THREE TO ROLLING CODE
516
NEXT HIGHEST POWER OF THREE
518
520
DONE?
NO
YES
CLEAR BIT COUNTER
522

Fig. 7B

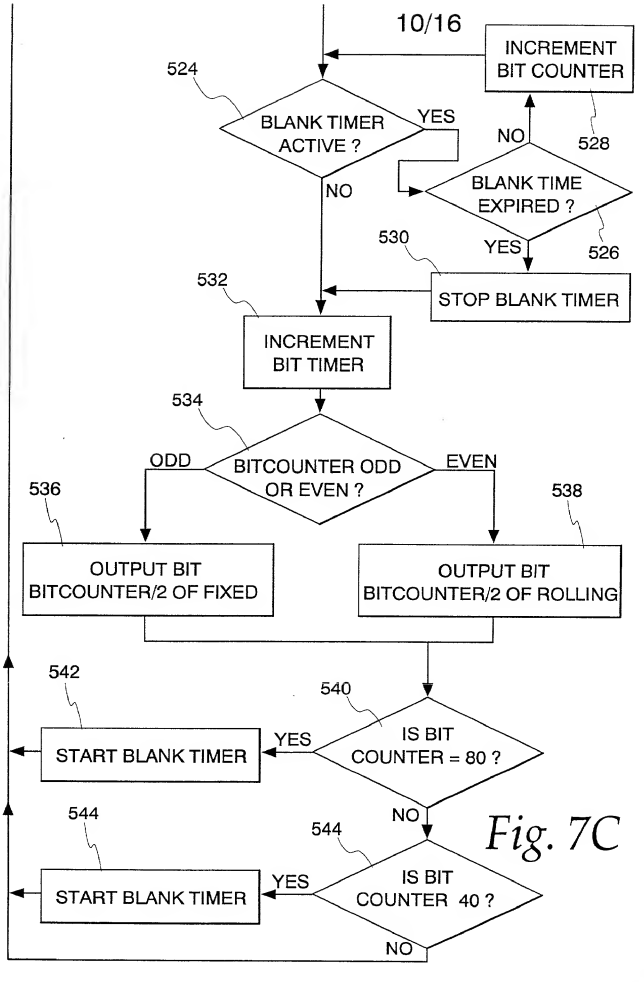

INCREMENT BIT COUNTER
524
BLANK TIMER ACTIVE ?
YES
NO
528
BLANK TIME EXPIRED ?
NO
YES
526
530
STOP BLANK TIMER
532
INCREMENT BIT TIMER
534
BITCOUNTER ODD OR EVEN ?
ODD
EVEN
536
538
OUTPUT BIT BITCOUNTER/2 OF FIXED
OUTPUT BIT BITCOUNTER/2 OF ROLLING
542
540
START BLANK TIMER
YES
IS BIT COUNTER = 80 ?
NO
544
544
START BLANK TIMER
YES
IS BIT COUNTER 40 ?
NO

Fig. 7C

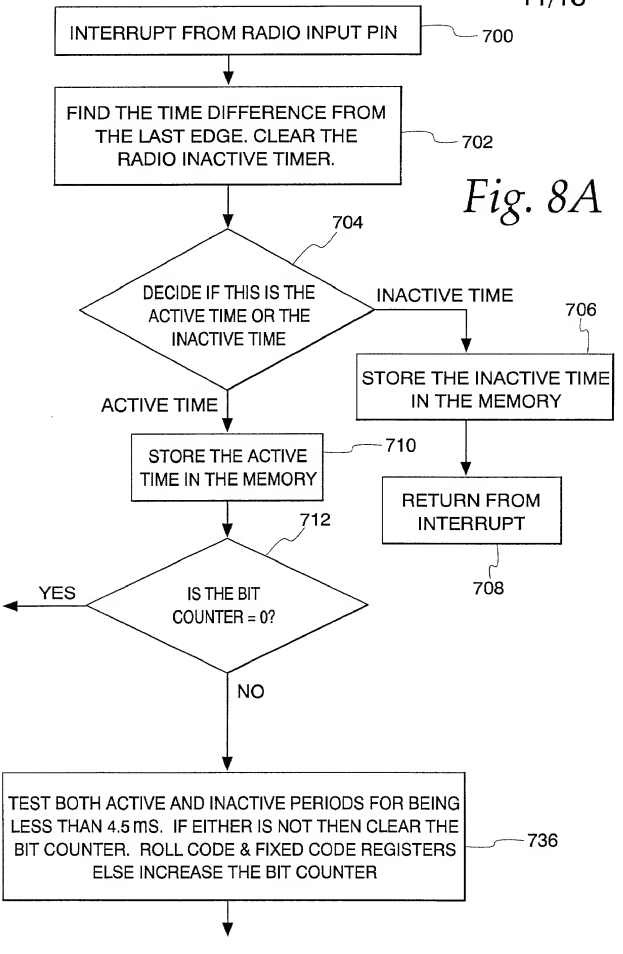
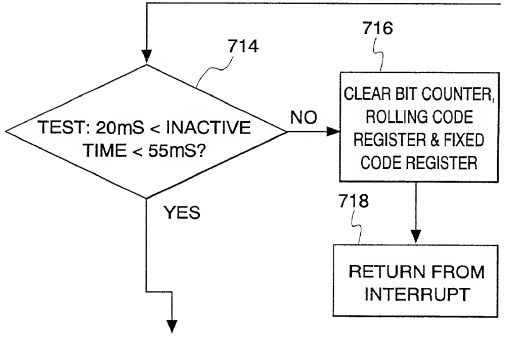

INTERRUPT FROM RADIO INPUT PIN
700
FIND THE TIME DIFFERENCE FROM THE LAST EDGE. CLEAR THE RADIO INACTIVE TIMER.
702
704
DECIDE IF THIS IS THE ACTIVE TIME OR THE INACTIVE TIME
INACTIVE TIME
706
STORE THE INACTIVE TIME IN THE MEMORY
ACTIVE TIME
STORE THE ACTIVE TIME IN THE MEMORY
710
RETURN FROM INTERRUPT
708
712
YES
IS THE BIT COUNTER = 0?
NO
TEST BOTH ACTIVE AND INACTIVE PERIODS FOR BEING LESS THAN 4.5 mS. IF EITHER IS NOT THEN CLEAR THE BIT COUNTER. ROLL CODE & FIXED CODE REGISTERS ELSE INCREASE THE BIT COUNTER
736

Fig. 8A

Fig. 8B	*Fig. 8A*
Fig. 8C	*Fig. 8D*
	Fig. 8E
	Fig. 8F

Fig. 8B



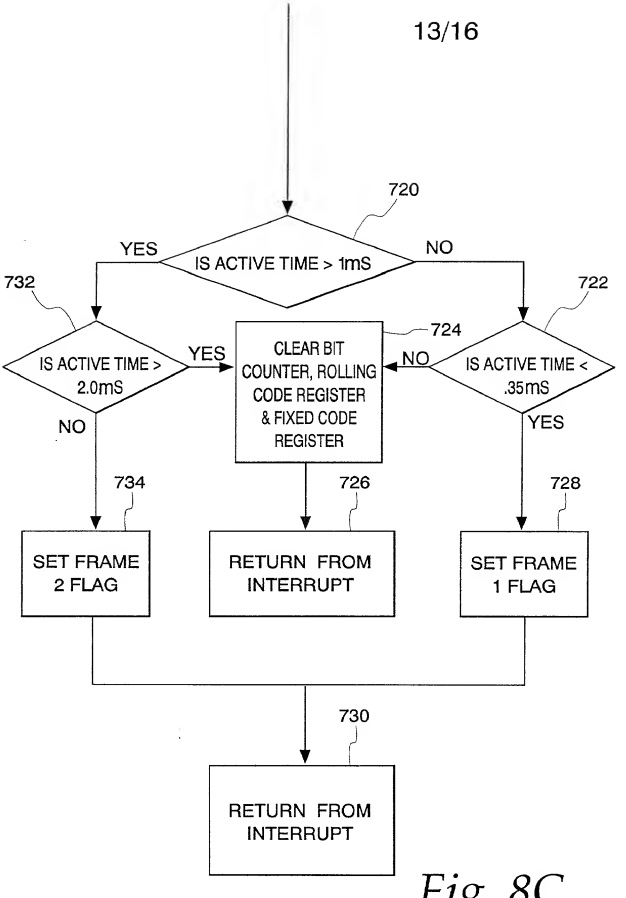

720
IS ACTIVE TIME > 1mS
YES
NO
732
722
IS ACTIVE TIME > 2.0mS
YES
724
CLEAR BIT COUNTER, ROLLING CODE REGISTER & FIXED CODE REGISTER
NO
IS ACTIVE TIME < .35mS
NO
YES
734
726
728
SET FRAME 2 FLAG
RETURN FROM INTERRUPT
SET FRAME 1 FLAG
730
RETURN FROM INTERRUPT

Fig. 8C

Fig. 8D

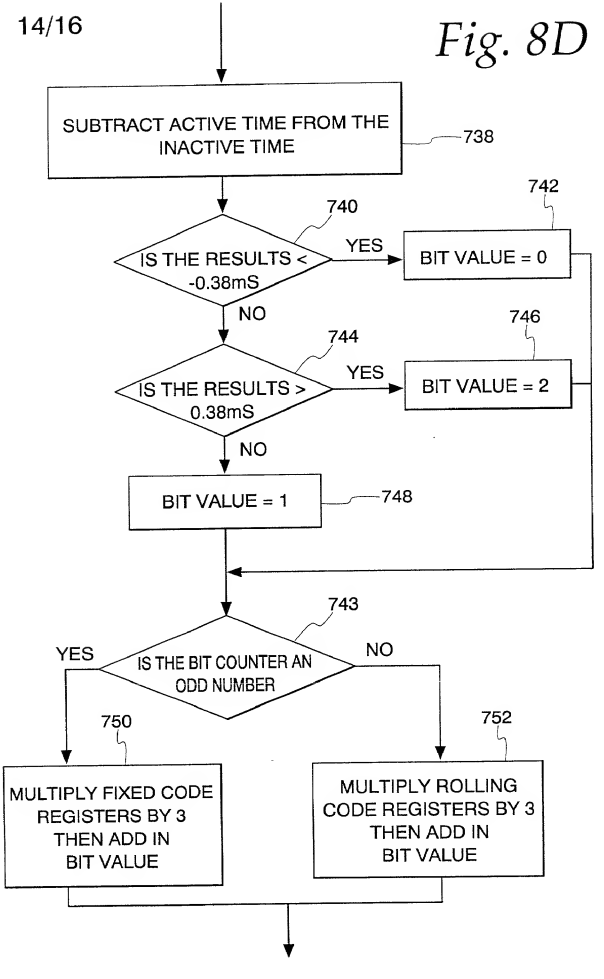
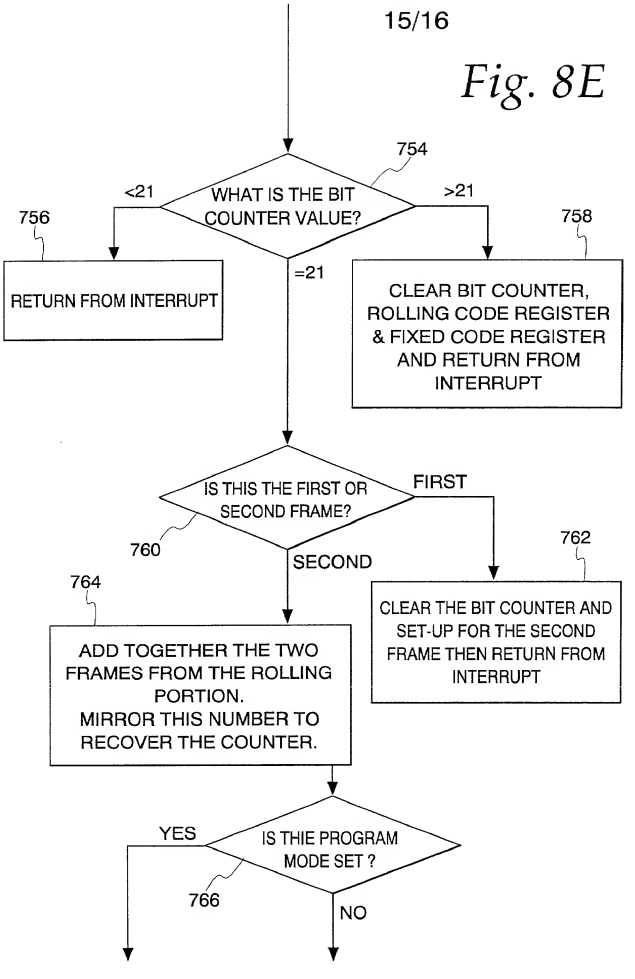

SUBTRACT ACTIVE TIME FROM THE INACTIVE TIME
738
740
IS THE RESULTS < -0.38mS
YES
742
BIT VALUE = 0
NO
744
IS THE RESULTS > 0.38mS
YES
746
BIT VALUE = 2
NO
BIT VALUE = 1
748
743
IS THE BIT COUNTER AN ODD NUMBER
YES
NO
750
MULTIPLY FIXED CODE REGISTERS BY 3 THEN ADD IN BIT VALUE
752
MULTIPLY ROLLING CODE REGISTERS BY 3 THEN ADD IN BIT VALUE

Fig. 8E


754
WHAT IS THE BIT COUNTER VALUE?
<21
>21
=21
756
RETURN FROM INTERRUPT
758
CLEAR BIT COUNTER, ROLLING CODE REGISTER & FIXED CODE REGISTER AND RETURN FROM INTERRUPT
IS THIS THE FIRST OR SECOND FRAME?
760
FIRST
SECOND
762
CLEAR THE BIT COUNTER AND SET-UP FOR THE SECOND FRAME THEN RETURN FROM INTERRUPT
764
ADD TOGETHER THE TWO FRAMES FROM THE ROLLING PORTION.
MIRROR THIS NUMBER TO RECOVER THE COUNTER.
IS THIE PROGRAM MODE SET ?
766
YES
NO

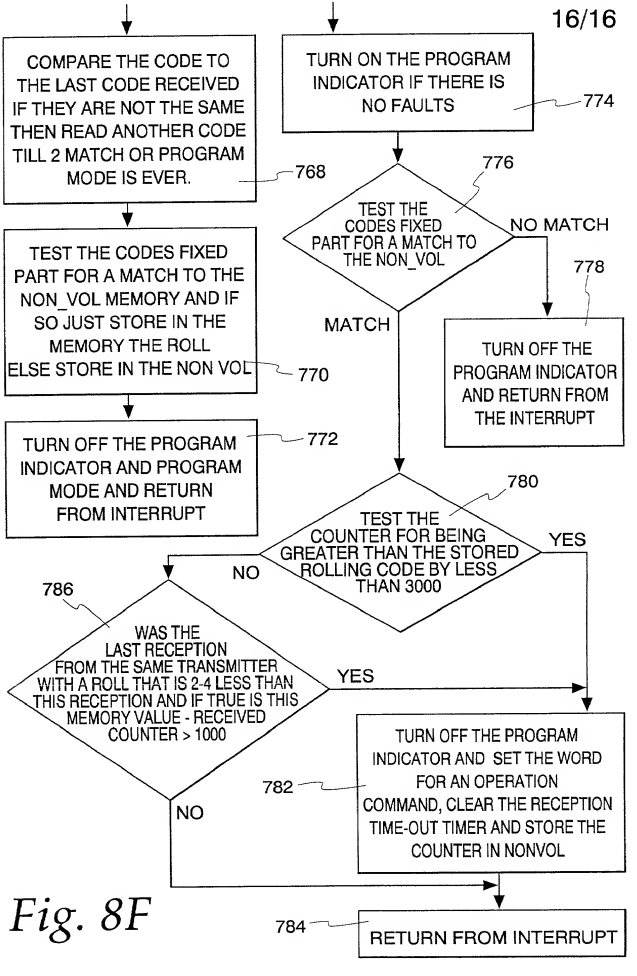

COMPARE THE CODE TO THE LAST CODE RECEIVED IF THEY ARE NOT THE SAME THEN READ ANOTHER CODE TILL 2 MATCH OR PROGRAM MODE IS EVER.
768
TEST THE CODES FIXED PART FOR A MATCH TO THE NON_VOL MEMORY AND IF SO JUST STORE IN THE MEMORY THE ROLL ELSE STORE IN THE NON VOL
770
TURN OFF THE PROGRAM INDICATOR AND PROGRAM MODE AND RETURN FROM INTERRUPT
772
TURN ON THE PROGRAM INDICATOR IF THERE IS NO FAULTS
774
TEST THE CODES FIXED PART FOR A MATCH TO THE NON_VOL
776
NO MATCH
MATCH
TURN OFF THE PROGRAM INDICATOR AND RETURN FROM THE INTERRUPT
778
TEST THE COUNTER FOR BEING GREATER THAN THE STORED ROLLING CODE BY LESS THAN 3000
780
YES
NO
WAS THE LAST RECEPTION FROM THE SAME TRANSMITTER WITH A ROLL THAT IS 2-4 LESS THAN THIS RECEPTION AND IF TRUE IS THIS MEMORY VALUE - RECEIVED COUNTER > 1000
786
YES
NO
TURN OFF THE PROGRAM INDICATOR AND SET THE WORD FOR AN OPERATION COMMAND, CLEAR THE RECEPTION TIME-OUT TIMER AND STORE THE COUNTER IN NONVOL
782
RETURN FROM INTERRUPT
784

Fig. 8F